

1 I CLAIM:

2 1. A navigation system comprising:

3 end user electronic devices;

4 a customer-interface server; and

5 a navigation-services server,

6 wherein said end user electronic devices send requests for navigation services to
7 said customer-interface server and receive responses to said requests from said customer-
8 interface server;

9 wherein said customer-interface server includes programming that, upon
10 receiving said requests from said end user electronic devices, transmits query messages
11 over the Internet to said navigation-services server, wherein said query messages request
12 navigation information for responding to said requests;

13 wherein said navigation-services server receives said query messages from said
14 customer-interface server, and using navigation applications installed on said navigation-
15 services server and a geographic database associated therewith, formulates language-
16 independent reply messages to said query messages, and sends said language-
17 independent reply messages to said customer-interface server; and

18 wherein said customer-interface server further includes programming that, upon
19 receiving said language-independent reply messages from said navigation-services
20 server, formulates said responses and sends said responses to said end user electronic
21 devices.

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23 2. The navigation system of Claim 1 wherein said requests for navigation
24 services from said end user electronic devices are sent to said customer-interface server
25 over the Internet.

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27 3. The navigation system of Claim 1 wherein said language-independent
28 replay messages are in XML format.

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1 4. The navigation system of Claim 1 wherein said customer-interface server
2 uses XML stylesheets to formulate the responses that are sent to said end user electronic
3 devices.

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5 5. The navigation system of Claim 1 wherein the responses that are sent to
6 said end user electronic devices are in HTML format.

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8 6. The navigation system of Claim 5 wherein said customer-interface server
9 uses an XML stylesheet to formulate the responses that are sent to said end user
10 electronic devices into HTML format.

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12 7. A method for providing routing information using a navigation system, the
13 method comprising:

14 on a customer-interface server, receiving a request over a data network from an
15 end user for route guidance to a destination;

16 from the customer-interface server, sending a message over the data network to a
17 navigation-related information server for maneuvering instructions;

18 on the navigation-related information server, after receiving the message from the
19 customer-interface server, calculating a route to the destination and determining a series
20 of maneuvers for traveling along a route to the destination;

21 on the navigation-related information server, forming a language- and format-
22 independent data structure that represents the series of maneuvers;

23 from the navigation-related information server, sending the language- and format-
24 independent data structure over the data network to the customer-interface server;

25 on the customer-interface server, using the language- and format-independent data
26 structure received from the navigation-related information server to form language- and
27 format-specific maneuvering instructions; and

28 from the customer-interface server, providing the form language- and format-
29 specific maneuvering instructions to the end user over the data network.

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1 8. The method of Claim 7 wherein the language- and format-specific
2 maneuvering instructions are in HTML format.

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4 9. The method of Claim 7 wherein the language- and format-independent
5 data structure is in XML format.

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7 10. The method of Claim 7 wherein the data network comprises the Internet.

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9 11. The method of Claim 7 wherein said customer-interface server uses an
10 XML stylesheet to form the language- and format-specific maneuvering instructions.

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